DOCUMENT RESUME

ED 393 109 CS 215 257

AUTHOR McMackin, Mary C.
TITLE Portfolios: A Vehicle for Inquiry.
PUB DATE [96]
NOTE 20p.
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Childrens Literature; *Educational Objectives; Elementary Education; *Inquiry; *Portfolio Assessment; Portfolios (Background Materials); Preservice Teacher Education; *Student Centered Curriculum; *Student Evaluation; Writing (Composition)
IDENTIFIERS *Reflective Writing

ABSTRACT

By blending elements of inquiry with the components of portfolios, learning and thinking in teacher preparation courses can be extended and possible tensions between "covering content" and allowing "open-ended investigation" can be mitigated. Over the years, the author mused about how she might nudge graduate students in her education courses to learn more about learning and still "cover" the material. Portfolio assessment seemed to be one way to allow students to take more responsibility for their own learning. Students could set individual goals, select items (or artifacts) to include in the portfolio, and reflect on their growth. But something was still missing. The inquiry method seemed to offer the missing link. There are 5 major components of the inquiry-based portfolio approach: (1) setting of goals by students and instructor; (2) the selection of items to demonstrate that the goals have been met or seriously attempted; (3) reflections; (4) an evaluation of the portfolio by the students and the instructor; and (5) the establishment of future goals. Inquiry can take 3 forms: inductive, deductive, or transductive (creative thinking, comparing concepts in unique or artistic ways). By blending the elements of inquiry with the components of portfolios, it appears that the unique benefits of each process are complemented and strengthened. The psychological needs of adult learners to be self-directing are met, students are challenged to raise questions and seek answers, and substantive learning results. (Contains 17 references and 3 figures.) (TB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 393 109

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
M. McMackin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Portfolios: A Vehicle for Inquiry

Mary C. McMackin

Lesley College, School of Education

Home Address: 758 Webster Street

Needham, MA 02192

Work Phone: (617) 349-8407

Home Phone: (617) 449-7890

CS215257

BEST COPY AVAILABLE

Running Head: Portfolios: A Vehicle

Abstract

By blending elements of inquiry with the components of portfolios, it appears that the unique benefits of each process are complemented and strengthened. Through inquiry portfolios the psychological needs of learners to be self-directing are met, education students in a language arts methods course are challenged to raise questions and seek answers, and substantive learning results.

Portfolios: A Vehicle for Inquiry

Children love to hear and tell riddles. For younger children, half the delight from this experience comes from being able to tell others the answer; for older children, the fun emanates from the challenge of trying to figure out the answer. Unfortunately, in many classrooms, the teacher enjoys being the one who asks the questions and who supplies the answers, thus, depriving students of the fun of thinking and problem solving (Bateman 1990). During the recent past, however, there seems to have been a gradual shift in all levels of education away from a focus on knowledge transmission towards a focus on inquiry (Manning, 1994; Monson & Monson, 1994).

Gill (1993) creates a visual image for inquiry by using dance as a metaphor for this process, stating that all cognitive activities consist of an interaction between the knower, the known, and the environment, with both the knower and the known continually changing throughout the experience. Education is therefore not the transmission of knowledge from the known to the knower, but rather a give-and take process which involves the mind and body of both the known and the knower.

This shift away from knowledge transmission and towards inquiry has caused professionals to reconsider the role of the learner, and to revise curricula, instruction, and assessment accordingly, from pre-K through graduate school.

This article will examine how inquiry and portfolios can be blended to extend learning and thinking in teacher preparation courses and address how possible tensions between "covering content" and allowing "open-ended investigation" can be mitigated. In essence, the portfolio model described in this article is bifurcated to provide a balance between independent inquiry and course work. Students are responsible for establishing and investigating an inquiry goal of their choosing. They are also responsible for documenting how instructor-designated course objectives are individually met.

The Inquiry Goal

Over the years, I questioned how I could nudge the graduate students in my education courses to learn more about learning and still "cover" all the material that they would be expected to know about the language arts in 15 short weeks. Portfolio assessment seemed to be one way to allow students to take more responsibility for their own learning. They could set individual goals, select items (or artifacts) to include in the portfolio, and reflect on their growth.

Although portfolios enabled the students to engage more directly in the learning process, something was still missing. Most of the goals that the students established were relatively "safe." The goals did not challenge the students to think critically, nor did the goals challenge them to reshape their knowledge in order to continue to

grow (Dewey, 1938). Knowledge became the end product rather than a vehicle for improvement and change.

A typical portfolio goal in the elementary education literacy course may have been to read a specified number of new multicultural children's books. This would have been an appropriate goal for this methods course, but would Dewey have been satisfied? Would this experience "take up something from those which have gone before and modify in some way the quality of those which come after" (Dewey, 1938, p.35)? Probably not! I slowly began to realize that the idea of inquiry was missing from the portfolios.

Authentic problems needed to be identified. Solutions that could be integrated with the past and extended usefully into the future needed to be sought. Students needed to formulate a problem, collect data, analyze the data, and design an action plan that would promote growth and extend knowledge.

I gradually realized that by blending elements of inquiry with the components of portfolios, I could more readily (1) encourage students to learn about the learning process, (2) challenge them to become responsible for their own learning, (3) empower them to make significant changes in education, and (4) provide for them a means of documenting cognitive and professional growth over time. At the same time, I there appears to be a broadening of the curriculum content that is "covered."

A Portfolio Model

The following portfolio model is based on the work of Tierney, Carter, and Desai (1991), Graves and Sunstein (1992), and Green and Lane (1994). There are 5 major components of this portfolio process: (1) the setting of goals by students and instructor; (2) the selection of items to demonstrate that each goal has been met (or at least seriously attempted); (3) reflections; (4) an evaluation of the portfolio (by both student and instructor); (5) and the establishment of future goals.

Having the inquiry process framed within a portfolio appears to be logical and appropriate. A closer look at each component of this model will help to illustrate how reflectivity and inquiry are enhanced.

Establishing Goals

Malcolm Knowles (1989), in his work on adult learning, or andragogy, pointed out that most adults have a deep psychological need to be self-directing, they approach learning from perspectives of real-world tasks and problems to be solved, and given sufficient positive reinforcement and an environment that is conducive to learning, they are intrinsically motivated to extend their skills and knowledge. With these characteristics in mind, how can adults establish goals and engage in inquiry that fosters learning?

According to Schon (1983), adults begin the process of inquiry by *problem setting*. He contended that in most real-

life experiences, people are faced with problematic situations from which they must define a specific problem before they can attempt to solve it. The term *problem setting* is used to indicate how one defines the decisions one will make, the anticipated end results, and the means of achieving these ends.

Students in my courses first define the problems that they want to solve and then specify their inquiry goal(s) Figure 1 is a handout that I distribute which details the properties of an inquiry goal. The students are encouraged to become researchers, to investigate topics in depth, to design new materials, to synthesize information from multiple sources, to explore ways of integrating the arts with the language arts, and most importantly, to take risks.

Selection of Items

Inquiry Items

After the goals have been established, the students must document that these goals have been met, or at least seriously attempted. Frequently, three types of inquiry come into play as students establish and fulfill their goals (Hunkins, 1989):

* inductive forms of inquiry - students determine generalizations or new conceptual understandings by raising questions, investigating, and working from specific to general concepts;

* deductive forms of inquiry - students form a chain of logical relationships while working from general concepts to specific examples;

* transductive forms of inquiry - students focus on creative thinking, often comparing similar concepts in unique, artistic, and nonlogical ways.

For example, Laura, a graduate student who had an undergraduate degree in creative writing, wanted to combine her interest in writing with what she was learning about children's literature. Her inquiry goal was to learn more about how successful, published authors go through the process of writing picture books and then create a children's book for others to enjoy. She began her inquiry by interviewing children's authors. Next, in collaboration with her sister, an artist, she wrote a children's book which explained, through rhyme and illustrations, the metamorphosis of a caterpillar to a butterfly. Throughout this process, Laura used inductive inquiry when formulating her conceptualization of the metamorphosis process, worked deductively when taking bits of information from her interviews and making logical connections to her developing text, and applied transductive inquiry when translating the information into an artistic form - the children's book.

Another student, Paul, was interested in making history come alive for his upper elementary students. His interest in history, coupled with his love of poetry, led him to research little know facts about a famous historian and then

transform this information into clever, informative poems.

Each inquiry results in a unique product, be it a video, a new assessment tool, a Big Book, a workshop for parents. Yet, all of these inquiries contain common elements: problem setting, data collection, data analysis, and the integration of extant and new ideas into something that has the potential for affecting positive change in others.

Course-Related Items

In addition to the item (or items) that demonstrates inquiry work, students are also required to include in their portfolios a representation of growth throughout the course. In order to accomplish this, students are asked to consider the 4 or 5 objectives that I have established for the course (as listed on the syllabus) and then include in their portfolios items that show how these objectives have been met. As documentation, students have included such items as course assignments (essays, graphic organizers, response guides, journal entries, case studies, field-based assignments, lesson plans), as well as, video tapes, auditory tapes, photographs of group projects, etc. In other words, they are free to include a sampling of whatever work they have done throughout the course that displays how the objectives have been met.

It appears that the process of selecting these representative items serves a dual purpose: it enhances organizational and evaluative thinking skills; and provides

opportunities for students to judge how much they have grown and accomplished throughout the semester.

In addition, students are encouraged to include in their portfolios (1) additional work that illustrates who they are at this point in their academic/professional lives (for example, related work from other courses or work from professional experiences), and (2) work that demonstrates growth over time (for example, revisions of earlier course work). Thus, the portfolio provides multiple sources of information for the students and for me.

Reflection

> "Students who have not learned to reflect on their own learning, who must depend on others to know how their learning is progressing or which learning strategies are working, are not well prepared for survival in a demographic society saturated with choices and complex decisions" (IRA/NCTE Task Force on Assessment, 1994).

Within this portfolio model, each student is asked to reflect in two ways: by responding to a set of instructor-created questions that guide reflection of the inquiry goal (see Figure 2), and by writing a reflection (letter, essay, poem, etc.) in which the portfolio author addresses how the course objectives have been met. Emphasis is placed on periodically slowing down the fast-paced forward intake of ideas and declarative knowledge in order to mark growth, to raise new questions, and to reflect.

Evaluation

Stakeholders in the educational process have a strong desire to know "what counts" (Wixson, 1994).

Although some proponents of portfolio assessment frown on having portfolios scored/graded and recommend that only narrative comments be used (Tierney, Carter, & Desai, 1991), others suggest the use of scoring guides in evaluating portfolios (Au, 1994; Salinger & Chittenden, 1994). I have tried both approaches and now use a combination of quantitative and qualitative feedback.

At the start of each semester, my students are given an evaluation sheet (Figure 3), which contains the criteria upon which the portfolios will be evaluated. Providing this evaluation sheet early in the semester helps to reduce anxiety. The students know up front "what counts." Furthermore, this evaluation scale, in essence, serves as a contract (Tierney & LaZansky, 1980) between the students and me. Each party in this communication exchange clearly understands the criteria by which the portfolios will be evaluated.

Each student shares the responsibility for evaluating his/her inquiry and course work by submitting a completed evaluation sheet along with the portfolio. After reading each portfolio, I review the submitted evaluation sheet and, using a different colored pen, I respond to the criteria on this same sheet.

Evaluating the portfolios does take time. But since most items are graded at designated points throughout the semester, the time it takes to read the final portfolios is greatly reduced. My major responsibilities in the final

evaluation are (1) to review any work that has been revised and resubmitted, (2) to read the student reflections, (3) to provide narrative feedback on post-its, where appropriate throughout the portfolio, (4) to evaluate the portfolio against the criteria on the evaluation sheets.

Traditionally I was the sole evaluator of the students' achievement, as demonstrated through their final products. With the inquiry portfolios, however, students and I jointly consider the goals that have been established, the processes that have been applied, and growth across a range of affective and cognitive dimensions.

Future Goals

Evaluation often signals the final step in a typical curriculum, instruction, assessment cycle. However, since I am hopeful that students will continue to inquire about issues and concerns in our profession, I ask them to think about where the course has taken them and what else needs to be investigated. In other words, I ask them to state future goals.

For some, establishing future goals means extending the original goals of this inquiry portfolio. For others, the inquiry and course work generate a new set of questions and new issues to examine.

Conclusion

The benefits of portfolio assessment have been enumerated by many (Green & Lane, 1994; Tierney, Carter, & Desai, 1991, Valencia, McGinley, & Pearson, 1990). Beyond

the advantages that we commonly associate with portfolios (such as growth over time, and an increase in metacognitive awareness), the following gains appear to be achieved when an atmosphere of inquiry is coupled with portfolio assessment. Inquiry portfolios have encouraged my students

* To define specific problems, to conduct investigations, to explore alternatives, to draw conclusions, and to make contributions to their field;
* To think critically while they shape and reshape ideas and concepts;
* To broaden the scope of the curricula, resulting in more substantive learning.

By blending elements of inquiry with the components of portfolios, it appears that the unique benefits of each process are complemented and strengthened. The psychological needs of adult learners to be self-directing are met, students are challenged to raise questions and seek answers, and substantive learning results.

As a teacher educator, I continually struggled to find ways to nudge my students to learn more about learning and to still "cover" all the content of the course in 15 weeks. Once I began to blend elements of inquiry with the components of portfolios, I began to find some answers to my questions. I'm sure this inquiry portfolio model will continue to evolve as I continue to understand more fully

the implications of portfolio assessment. However, this model has provided my students and me with opportunities to take risks and stretch in many new and rewarding directions.

References

Au, K.H. 1994. Portfolio Assessment: Experiences at the Kamehameha Elementary Education Program. In *Authentic reading assessment: Practices and possibilities*, eds. S.W. Valencia, E.H. Hiebert, & P.P. Afflerbach, 103-126. Newark, DE:IRA.

Bateman, W.L. 1990. *Open to question: The art of teaching and learning by inquiry*. San Francisco: Jossey-Bass Publishers.

Dewey, J. 1938. *Experience and education*. New York: Collier Books.

Gill, J.H. 1993. *Learning to learn: Toward a philosophy of education*. New Jersey: Humanities Press.

Graves. D.H., & Sunstein, B.S. eds. 1992. *Portfolio portraits*. Portsmouth, NH: Heinemann.

Green, A., & Lane, B. eds. 1994. *The portfolio source book*. Shoreham, VT: Vermont Portfolio Institute.

Hunkins, F.P. 1989. *Teaching thinking through effective questioning*. Norwood, MA: Christopher Gordon Publishers, Inc.

IRA/NCTE Task Force on Assessment. 1994. *Standards for the assessment of reading and writing*. Newark, DE: IRA and Urbana, IL: NCTE.

Knowles, M. 1989. Everything you wanted to know from Malcolm Knowles. *Training* 26: 45-50.

Manning,M. & Manning G. 1994. *Theme immersion: Inquiry-based curriculum in elementary and middle schools.* Portsmouth, NH: Heinemann.

Monson, R.J., & Monson, M.P. 1994. Literacy as inquiry: An interview with Jerome C. Harste. *The Reading Teacher* 47: 518-521.

Salinger, T., & Chittenden, E. 1994. *Focus on Research* Analysis of an early literacy portfolio: Consequences for instruction. *Language Arts* 71: 446-452.

Schon, D.A. 1983. *The reflective practitioner.* New York: Basic Books, Inc.

Tierney, R.J., Carter, M.A., & Desai, L.E. 1991. *Portfolio assessment in the reading-writing classroom.* Norwood, MA: Christopher Gordon Publishers, Inc.

Tierney, R.J., & LaZansky, J. 1980. The rights and responsibility of readers and writers: A contractual agreement. *Langauge Arts* 57: 606-613.

Valencia, S., McGinley, W., & Pearson, P.D. 1990. *Assessing reading and writing: Building a more complete picture for middle school assessment.* Cambridge, MA: Bolt, Beranek and Newman, Inc. (ERIC Document Reproduction Service No. ED 320 121)

Wixson, K.K. 1994. Commentary on the Maryland School Performance Assessment Program: A new view of assessment. In *Authentic reading assessment: Practices and possibilities*, eds. S.W. Valencia, E.H. Hiebert, & P.P. Afflerbach, 277-283. Newark, DE:IRA.

Properties of an Inquiry Goal

As you begin to think about your inquiry goal, please keep in mind John Dewey's (1938) principle of continuity of experience:

> "... every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after" (p.35).

Your inquiry goal should:

* Involve a course-related topic of interest to you
* Challenge you to grow intellectually and professionally
* Help change the world. HINT: How has this goal contributed to the continuation of knowledge in this field? How will others benefit from your inquiry?

You are expected to both consume and produce new information and ideas. An inquiry goal goes beyond collecting data. This data must be analyzed, reshaped, and transformed into actions that produce change and growth for you and others.

EXAMPLE: (Non-inquiry goal)

> To investigate what metacognitive strategies students use to monitor their own comprehension. [This is not an inquiry goal because it stops at data collection.]

EXAMPLE: (Inquiry goal)

> To investigate what metacognitive strategies students use to monitor their own comprehension and design a questionnaire to measure students' awareness of strategic reading processes.

Figure 1

PORTFOLIO REFLECTION QUESTIONS

Please use the following questions to frame your written reflection. This reflection should accompany the item(s) that support your inquiry goal.

1. What was your inquiry goal? Please state it before you being to answer the following questions.
2. What was your rationale for pursuing this goal?
3. Do you feel that your goal was achieved? If so, please explain; if not, how would you continue to work on this goal (i.e. your action plan)?
4. What new information did you discover about your topic as a result of this inquiry?
5. What conclusions can you draw from your discoveries?
6. How can these conclusions be applied to your teaching?
7. Both process and product are important. As I look at this *product*, I would like to keep in mind the *process* that you went through to produce it. How did you go about developing and completing this task? (metacognition)

Figure 2

Portfolio Evaluation Sheet

Name_____ Date_____

Please evaluate your portfolio according to the criteria listed below. Rate your portfolio by circling the appropriate number next to each criteria (with 5 being the highest).

1.	Does your portfolio reflect an understanding of the rationale behind portfolio assessment?	1 2 3 4 5
2.	Were your samples carefully selected to meet their intended purposes?	1 2 3 4 5
3.	Is your portfolio multidimensional?	1 2 3 4 5
4.	Does your portfolio display growth in cognitive and affective areas?	1 2 3 4 5
5.	Does your portfolio display evidence of reflective thinking that is substantive?	1 2 3 4 5
6.	Is your portfolio coherently organized and professionally presented?	1 2 3 4 5
7.	Are your future goals thoughtfully delineated?	1 2 3 4 5

* Did you find that the scope of your inquiry goal changed as you went through this process? yes no

If yes, please explain below how it changed.

Figure 3